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August 23, 1988

009/1.6/WWL.004
RS-NMS-85-009
Communication No. 279

U.S. Nuclear Regulatory Commission
Division of High-Level Waste Management
Technical Review Branch
One White Flint - 4H3
Washington, DC 20555

Attention: **Mr. Jeff Pohle, Project Officer**
Technical Assistance in Hydrogeology - Project B (RS-NMS-85-009)

Re: **Subtask 1.6: Compilation of USGS Comments on CDSCP for NNWSI**

Dear Mr. Pohle:

Attached please find the compilation of the USGS comments on the NNWSI CDSCP that you requested in your letter of May 17, 1988. The report has been prepared by Mr T. Sniff, the senior engineer for Water, Waste and Land (WWL), and it has received technical and managerial reviews by L. Davis (WWL) and M. Logsdon (NWC). The compilation was prepared under WWL's QA procedures, consistent with the NWC QA manual.

The USGS comments have been compiled by WWL in a concise manner, with the requested cross-references to both the proposed NRC breakdown of components - elements - information needs and the CDSCP. In addition to the hard copy of the report, your copy (though not the other copies on distribution) includes a 5-1/4-inch, DOS-formatted floppy diskette with the text in two versions. First, there is a Word Perfect file USGSREV.001; second, there is an ASCII file of the text, USGSREV.ASC.

Mr. Sniff has, in our opinion, done an extremely thorough job of compiling the USGS comments. The issues are summarized succinctly and clearly, and the internal referencing comports with my understanding of the NRC direction on this task. Three matters should be discussed with respect to this report. First, the topical and component-element breakdowns are based on our current understanding of the NRC PO's direction with respect to revising our reporting on conceptual models. We have two additional deliverables over the next few months which also are to be framed in this new way. Therefore, it is of some importance that the NRC Staff provide us with timely feedback on the way we have interpreted the PO's direction. That is, unless we are told otherwise, our compilation of the NRC's CDSCP comments and our final Conceptual Model Report (Subtask 1.4) will be organized consistently with the interpretation seen in this report.

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Second, both WWL and NWC consider that a task such as this - recompiling and, necessarily, interpreting someone else's comments on yet a third party's work and plans - may be a useful, even valuable exercise for the person who does the editing, but it is difficult for someone else subsequently to achieve the same level of benefit. In particular, it should be kept firmly in mind by the NRC Staff that this report is the WWL/NWC interpretation of the USGS comments in light of the specific direction provided by the NRC PO. The original USGS comments were prepared and produced for different purposes and by different people in a very different organization, and no one using this compilation should consider that it is necessarily and for all purposes a substitute for the full, original USGS text.

Finally, please note that this document does not, and was never intended to, indicate that WWL or NWC necessarily concur with all the USGS comments. There are a number of the comments that NWC and WWL find useful and probably important, particularly with respect to conceptual models and testing methodologies. On the whole, NWC finds the USGS comments to be quite typical of that organization's comments throughout the HLW program. They are technically sound (though reasonable technical people might disagree on some matters), but they do not provide any particular focus: What is important and how would one know? What is necessary and sufficient? To assess the USGS comments from the perspective of a technical assistance contractor to the NRC, the issue is fundamentally one of point-of-view. It is NWC's observation that USGS comments are ordinarily made from the point of view of a research scientist: if all is not known about a phenomenon, then there is uncertainty, and that alone makes the matter a legitimate area for further inquiry. In contrast, it seems to us that the NRC point of view (consistent with the notion of "elements of proof") needs to be that of a (technical) regulator: what must be shown for the ASLB to reach a finding about a performance objective.

For example, on p. 133 of the USGS comments, the question of saturated ground water flow from the Pahranaagat Valley into the "study area" is raised. The USGS points out that there is "uncertainty" in this matter because there is no direct (only stable isotopic) evidence, and, therefore, studies should be planned to address this uncertainty (WWL, p. 9). If one were writing a professional paper about recharge to Ash Meadows, a reviewer who does not find stable isotope studies to be convincing might reasonably comment that there is uncertainty about underflow from Pahranaagat Valley and that one's case that underflow occurs (were it based on the Winograd and Friedman (1972) deuterium data alone) is not convincing. As this is the general perspective of the anonymous USGS reviewer, the comment is reasonable in its own context.

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However valid the comment may be as a matter of scientific curiosity, from NWC's perspective it should be considered in terms of its likely regulatory significance. A look at a map may help with this. The Pahranaagat Valley is located some 100 kilometers east-northeast of Yucca Mountain, essentially due north of Las Vegas; there are at least two major valleys (Immigrant and Desert) and their accompanying major ranges between the Pahranaagat Valley and vicinity of Yucca Mountain. How and how much could any NRC performance objective be influenced by the resolution of the USGS comment? Has anyone tried to assess this? Does the Staff plan such an assessment? Do you want NWC/WWL to do this? Presumably, the NRC's further interest in this - and all other matters raised by the USGS - depends on its regulatory significance, which, in this case, appears to be minimal. However, in WWL's compilation the likely regulatory significance has not been addressed, as we specifically were not directed to provide any comment or evaluation.

If you have any questions about this transmittal letter or the WWL compilation, please contact me immediately. We look forward to an early response to the questions concerning our interpretation of the PO's direction concerning the elements/components approach to relating the USGS comments to the next round of conceptual model updates.

Respectfully submitted,
NUCLEAR WASTE CONSULTANTS, INC.



Mark J. Logsdon, Project Manager

Att: WWL letter of August 16, 1988 with attached USGS comments (hard and electronic copies)

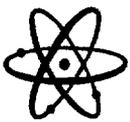
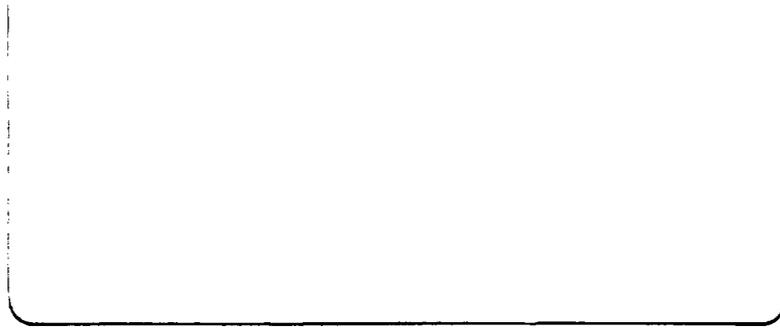
cc: US NRC - Director, NMSS (ATTN PSB) - hard copy only
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bc: L. Davis, WWL

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